I claim:

1. A method for winding a material onto a spool comprising:

placing a buffer pad on an outer surface of a core of said spool;

winding said material onto said buffer pad while applying a draw tension to said material; and

functionally changing said draw tension as said material is wound onto said spool and said buffer pad.

2. The method as claimed in claim 1, wherein said changing occurs according to a monotonical function which monotonically varies said draw tension during said winding.

3. The method as claimed in claim 2, wherein said monotonical function monotonically decays said draw tension during said winding.

4. The method as claimed in claim 1, wherein said buffer pad has a Young's modulus lower than that of said material.

5. The method as claimed in claim 1, further comprising varying an angular speed of said spool while said material is winding onto said spool.

6. The method as claimed in claim 5, wherein said angular speed is increased while said material is winding onto said spool.

7. The method as claimed in claim 5, wherein said angular speed is varied according to a monotonical function.

8. The method as claimed in claim 1, further comprising winding a pad between successive layers of said material.

9. The method as claimed in claim 8, wherein said pad has a Young's modulus less than that of said material.

10. The method as claimed in claim 8, wherein said pad is continuously wound with said material.

11. The method as claimed in claim 8, further comprising:

completing said winding of said material onto said spool; and

winding said material onto a second spool while removing said pad from said winding.

12. A method for winding a material onto a spool comprising:

winding said material onto a spool while applying a draw tension to said material; and

functionally changing an angular velocity of said spool as said material is wound onto said spool.

13. The method as claimed in claim 12, further comprising placing a buffer pad on said spool prior to winding said material.

14. The method as claimed in claim 13, wherein said buffer pad has a Young's modulus less than that of said material.

15. The method as claimed in claim 12, wherein said changing occurs according to a monotonical function which monotonically varies said angular velocity during said winding.

16. The method as claimed in claim 15, wherein said monotonical function monotonically increases said angular velocity during said winding.

17. The method as claimed in claim 12, further comprising varying said draw tension while said material is winding onto said spool.

18. The method as claimed in claim 17, wherein said draw tension is decreased while said material is winding onto said spool.

19. The method as claimed in claim 17, wherein said draw tension is varied according to a monotonical function.

20. The method as claimed in claim 12, further comprising winding a pad between successive layers of said material.

21. The method as claimed in claim 20 wherein said pad has a Young's modulus less than that of said material.

22. The method as claimed in claim 20, wherein said pad is continuously wound with said material.

23. The method as claimed in claim 20, further comprising:

completing said winding of said material onto said spool; and

winding said material onto a second spool while removing said pad from said winding.

24. A method of winding a material on a spool comprising:

winding said material onto a first spool while inserting a pad between successive layers of said material and providing a draw tension on said material; and

winding said material onto a second spool from said first spool while removing said pad from said windings of said material.

25. The method as claimed in claim 24, further comprising placing a buffer pad on said first spool prior to winding said material.

26. The method as claimed in claim 25, wherein said buffer pad has a Young's modulus less than that of said material.

27. The method as claimed in claim 24, wherein said pad has a Young's modulus less than that of said material.

28. The method as claimed in claim 24, further comprising varying said draw tension while said material is winding onto said first spool.

29. The method as claimed in claim 28, wherein said draw tension is decreased while said material is winding onto said first spool.

30. The method as claimed in claim 28, wherein said draw tension is varied according to a monotonical function.

31. The method as claimed in claim 24, further comprising varying an angular speed of said first spool while said material is winding onto said first spool.

32. The method as claimed in claim 31, wherein said angular speed is increased while said material is winding onto said first spool.

33. The method as claimed in claim 31, wherein said angular speed is varied according to a monotonical function.

34. A method for winding a buffer tube having at least one optical fiber therein onto a spool comprising:

placing a buffer pad on an outer surface of a core of said spool;

winding said buffer tube onto said buffer pad while applying a draw tension to said buffer tube; and

functionally changing said drawing tension as said buffer tube is wound onto said spool and said buffer pad.

35. The method as claimed in claim 34, wherein said changing occurs according to a monotonical function which monotonically varies said draw tension during said winding.

36. The method as claimed in claim 35, wherein said monotonical function monotonically decays said draw tension during said winding.

37. The method as claimed in claim 34, wherein the Young's modulus of said buffer pad is lower than the Young's modulus of said buffer tube.

38. The method as claimed in claim 34, wherein a diameter of said spool at a point where said buffer tube is winding on said spool is larger than 100 mm.

39. The method as claimed in claim 34, wherein a length of said buffer tube is less than 10 km.

40. The method as claimed in claim 34, further comprising varying an angular speed of said spool while said buffer tube is winding onto said spool.

41. The method as claimed in claim 40, wherein said angular speed is increased while said buffer tube is winding onto said spool.

42. The method as claimed in claim 40, wherein said angular speed is varied according to a monotonical function.

43. The method as claimed in claim 34, further comprising winding a pad between successive layers of said buffer tube.

44. The method as claimed in claim 43 wherein said pad has a Young's modulus less than that of said buffer tube.

45. The method as claimed in claim 43, wherein said pad is continuously wound with said buffer tube.

46. The method as claimed in claim 43, further comprising:

completing said winding of said buffer tube onto said spool; and

winding said buffer tube onto a second spool while removing said pad from said winding.

47. A method for winding a buffer tube having at least one optical fiber therein onto a spool comprising:

winding said buffer tube onto a spool while applying a draw tension to said buffer tube; and

functionally changing an angular velocity of said spool as said buffer tube is wound onto said spool.

48. The method as claimed in claim 47, further comprising placing a buffer pad on said spool prior to winding said buffer tube.

49. The method as claimed in claim 48, wherein said buffer pad has a Young's modulus less than that of said buffer tube.

50. The method of as claimed claim 47, wherein said changing occurs according to a monotonical function which monotonically varies said angular velocity during said winding.

51. The method as claimed in claim 50, wherein said monotonical function monotonically increases said angular velocity during said winding.

52. The method as claimed in claim 47, wherein a diameter of said spool at a point where said buffer tube is winding on said spool is larger than 100 mm.

53. The method as claimed in claim 47, wherein a length of said buffer tube is less than 10 km.

54. The method as claimed in claim 47, further comprising varying said draw tension while said buffer tube is winding onto said spool.

55. The method as claimed in claim 54, wherein said draw tension is decreased while said buffer tube is winding onto said spool.

56. The method as claimed in claim 54, wherein said draw tension is varied according to a monotonical function.

57. The method as claimed in claim 47, further comprising winding a pad between successive layers of said buffer tube.

58. The method as claimed in claim 57, wherein said pad has a Young's modulus less than that of said buffer tube.

59. The method as claimed in claim 57, wherein said pad is continuously wound with said buffer tube.

60. The method as claimed in claim 57, further comprising:

completing said winding of said buffer tube onto said spool; and

winding said buffer tube onto a second spool while removing said pad from said winding.

61. A method of winding a buffer tube having at least one optical fiber contained therein on a spool comprising:

winding said buffer tube onto a first spool while inserting a pad between successive layers of said buffer tube and providing a draw tension on said buffer tube; and

winding said buffer tube onto a second spool from said first spool while removing said pad from said windings of said buffer tube.

62. The method as claimed in claim 61, further comprising placing a buffer pad on said spool prior to winding said buffer tube.

63. The method as claimed in claim 62, wherein said buffer pad has a Young's modulus less than that of said buffer tube.

64. The method as claimed in claim 61, wherein said pad has a Young's modulus less than that of said buffer tube.

65. The method as claimed in claim 61, wherein a diameter of said first spool at a point where said buffer tube is winding on said first spool is larger than 100 mm.

66. The method as claimed in claim 61, wherein a length of said buffer tube is less than 10 km.

67. The method as claimed in claim 61, further comprising varying said draw tension while said buffer tube is winding onto said first spool.

68. The method as claimed in claim 67, wherein said draw tension is decreased while said buffer tube is winding onto said spool.

69. The method as claimed in claim 67, wherein said draw tension is varied according to a monotonical function.

70. The method as claimed in claim 61, further comprising varying an angular speed of said first spool while said buffer tube is winding onto said first spool.

71. The method as claimed in claim 70, wherein said angular speed is increased while said buffer tube is winding onto said first spool.

72. The method as claimed in claim 70, wherein said angular speed is varied according to a monotonical function.

73. A fiber optic buffer tube having at least one optical fiber therein made in accordance with the method claimed in claim 34.

74. A fiber optic buffer tube having at least one optical fiber therein made in accordance with the method claimed in claim 47.

75. A fiber optic buffer tube having at least one optical fiber therein made in accordance with the method claimed in claim 61.

76. A method for winding a fiber optic buffer tube onto a spool, comprising:

placing a buffer pad on an outer surface of a core of said spool;

winding said buffer tube onto said buffer pad while applying a first draw tension to said buffer tube;

functionally changing said first draw tension as said buffer tube is wound onto said spool and said buffer pad;

measuring EFL of said buffer tube and determining an error in said EFL; and

re-spooling said buffer tube onto a second spool to correct said EFL error.

77. The method as claimed in claim 76, further comprising heating said buffer tube during said re-spooling.

78. The method as claimed in claim 76, further comprising functionally changing a second draw tension on said buffer tube as said buffer tube is re-spooling to correct said EFL error.

79. The method as claimed in claim 78, wherein functionally changing said second draw tension on said buffer tube as said buffer tube is re-spooling occurs according to a monotonical function which monotonically varies said second draw tension during said re-spooling.

80. The method as claimed in claim 78, wherein said functionally changing of said second draw tension uses a different function than that used for functionally changing said first draw tension.

81. The method as claimed in claim 76, further comprising placing a second buffer pad on an outer surface of a core of said second spool prior to said re-spooling.

82. The method as claimed in claim 76, further comprising varying an angular speed of said second spool while said buffer tube is winding onto said second spool.

83. The method as claimed in claim 76, further comprising placing a pad between successive layers of said buffer tube during said re-spooling.